

SN: 10/646,393

Docket No. S-89,639

In Response to Office Action dated June 21, 2005

REMARKS

Applicants appreciate the courtesy shown by the Office, as evidenced by the Office Action mailed on June 21, 2005. In that Office Action, the Examiner rejected Claims 1-51. As such, Claims 1-51 remain in the case with none of the claims being allowed.

The June 21 Office Action has been carefully considered. After such consideration, Claims 1, 20, 38, and 48 have been amended. Applicants respectfully request reconsideration of the application in light of the accompanying amendment and remarks presented herein.

Rejection under 35 U.S.C. §112

Claims 48-51 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, the Examiner states that the Claim 48 is incomplete, as the body of the claim is silent regarding any step involving "perchloric acid" mentioned in the preamble.

Applicants submit that the preamble of Claim 48 has been amended to state that the aqueous solution comprises chromic acid and perchloric acid. Applicants submit that the claim is now complete and that the rejection of Claims 48-51 under 35 U.S.C. §112, second paragraph, is successfully overcome.

Rejection under 35 U.S.C. §102

Claims 1-10, 12, 13, 16-29, 32, 32, 35-37, and 48-50 have been rejected under 35 U.S.C. §102(b) as being anticipated by Davis et al. (U.S. Patent 4,770,784).

Claims 1 and 48 have each been amended to recite the limitation that the ultrafiltration membrane has a molecular weight cutoff (MWCO) value that is less than the molecular weight of the water-soluble polymer. Claim 20 has been amended to recite the limitation that the water-soluble polymer has molecular weights that are capable of being retained by an ultrafiltration membrane with a first molecular weight cutoff value that is less than the polymer molecular weights.

In order to anticipate under §102, a reference must teach every limitation of the claimed invention.

Applicants submit that Davis et al. do not teach the limitation that the ultrafiltration membrane has a molecular weight cutoff (MWCO) value that is less than

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the molecular weight of the water-soluble polymer. As noted by the Examiner in the June 21 Office Action, in column 5, lines 16-22, Davis et al. instead teach that polymer size can be selected by grinding an absorbent resin material to a small particle size to achieve a higher surface area. The reference is silent as to separation of polymers and a water-soluble polymer/small molecule complexes according to their respective molecular weights and selection of an ultrafiltration membrane having a MWCO value that is less than the polymer molecular weight.

Applicants therefore submit that, because the reference fails to teach all of the limitations of independent Claims 1, 20, and 48, the rejection of these claims and the claims dependent thereon under 35 U.S.C. §102(b) as being anticipated by Davis et al. is successfully overcome.

Rejections under 35 U.S.C. §103

Claims 11, 14, 15, 30, 33, 34, and 51 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Smith et al. (U.S. Patent 5,891,956).

In order to establish a *prima facie* case of obviousness, the combination of references cited by the Examiner must either teach or suggest all of the limitations of the claimed invention. Accordingly, Applicants submit that neither Davis et al. nor Smith et al., either individually or in combination with each other, teach or suggest all of the limitations of amended independent Claims 1 (from which Claims 11, 14, and 15 depend), 20 (from which Claims 30, 33, and 34 depend), and 48 (from which Claim 51 depends).

As previously presented, Davis et al. does not teach or suggest treating a water-soluble/small molecule complex with an ultrafiltration membrane having a MWCO value that is less than the molecular weight of the water-soluble polymer. Instead, the reference teaches the obtaining solid ion exchange resins of different sizes – not different molecular weights – by grinding the solid polymer to a sufficiently small particle size to increase surface area. Applicants submit that, while Smith et al., in column 11, lines 1-26, teach the use of ultrafiltration membranes having various MWCO values to separate water-soluble polymers by weight, the reference, does not teach treating a water-soluble polymer/small molecule complex by ultrafiltration.

Applicants therefore submit that, because the combination of references fails to teach or suggest all of the limitations of amended independent Claims 1, 20, and 48, the

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rejection of Claims 11, 14, 15, 30, 33, 34, and 51 under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Smith et al. is successfully overcome.

Claims 38-43 and 47 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Grinstead (U.S. Patent 4,775,298).

Applicants submit that independent Claim 38 has been amended to recite the limitation that the target small molecule is selected from the group consisting of arsenic acid, selenous acid, selenic acid, and antimonous acid, and treating the water-soluble/small molecule complex with an ultrafiltration membrane that has a MWCO value that is less than the molecular weight of the water-soluble polymer.

In order to establish a *prima facie* case of obviousness, the combination of references cited by the Examiner must either teach or suggest all of the limitations of the claimed invention. Accordingly, Applicants submit that neither Davis et al. nor Grinstead et al., either individually or in combination with each other, teach or suggest all of the limitations of Claims 38-43 and 47.

Applicants submit that neither Davis et al. nor Grinstead either individually or in combination with each other, teach or suggest that the target molecule is one of arsenic acid, selenous acid, selenic acid, and antimonous acid. Because the combination of references fails to teach or suggest all of the limitations of amended Claim 38, Applicants therefore submit that the rejection of Claim 38 and the claims dependent thereon under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Grinstead is successfully overcome.

Claims 44-46 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Grinstead et al., and in further view of Smith et al.

In order to establish a *prima facie* case of obviousness, the combination of references cited by the Examiner must either teach or suggest all of the limitations of the claimed invention. Accordingly, Applicants submit that neither Davis et al. nor Grinstead et al. nor Smith et al., either individually or in combination with each other, teach or suggest all of the limitations of Claims 44-46, which depend from amended Claim 38.

Applicants submit that, as previously presented, neither Davis et al. nor Grinstead et al. teach or suggest that the target molecule is one of arsenic acid, selenous acid, selenic acid, and antimonous acid. Applicants further submit that Smith

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et al. as well do not teach this limitation. Applicants therefore submit that, because the references cited by the Examiner neither teach nor suggest all of the limitations of claims 44-46, the rejection of these claims under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Grinstead et al., and in further view of Smith et al. is successfully overcome.

In light of the amendments and remarks presented herein, Applicants submit that the case is in condition for immediate allowance and respectfully request such action. If, however, any outstanding issues remain unresolved, the Examiner is invited to telephone the Applicants' counsel at the number provided below.

Respectfully submitted,

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